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Astronauts Fact Sheet



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COVER

Astronaut L. Gordon Cooper, his silver suit flickering in the mid-Pacific sun, steps out of his spacecraft "Faith 7" into the deck of the recovery ship after 22 orbits in space, May 15 and 16, 1963. This painting by artist Mitchell Jamieson is exhibited in the National Air and Space Museum, Washington, D.C.

NASA Photo: 65-H-253

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ASTRONAUT FACT SHEET

Of 73 pilots and scientists selected as astronauts since April 1959, 26 are on flight status at the National Aeronautics and Space Administration's Lyndon B. Johnson Space Center, Houston, Tex., and one other, now on other assignment, is available as flight crewman. The number of pilot-astronauts is 17 and 10 are scientist-astronauts.

Seven groups of astronauts have been selected. In Group 1 were the seven Mercury astronauts selected in April 1959. Nine test pilots, Group 2, were selected in September 1962. In Group 3 were 14 pilot-astronauts selected in October 1963. Group 4, the first six scientist-astronauts, was selected in June 1965. In April 1966, 19 pilot-astronauts were selected as Group 5. Group 6, 11 scientist-astronauts, was selected in August 1967. Seven Air Force Manned Orbital Laboratory pilots joined the NASA pilot-astronaut program in August 1969, as Group 7.

ALPHABETICAL LIST OF THE 73 ASTRONAUTS SELECTED

<u>NAME</u>	<u>ASTRONAUT STATUS</u>	<u>GROUP NUMBER</u>
Aldrin, Edwin E., Jr.	Retired	3
Allen, Joseph P.	Flight	6
Anders, William A.	Retired	3
Armstrong, Neil A.	Retired	2
Bassett, Charles A.	Deceased	3
Bean, Alan L.	Flight	3
Bobko, Karol J.	Flight	7
Borman, Frank	Retired	2
Brand, Vance D.	Flight	5
Bull, John S.	Resigned	5
Carpenter, M. Scott	Retired	1
Carr, Gerald P.	Retired	5
Cernan, Eugene A.	Retired	3
Chaffee, Roger B.	Deceased	3
Chapman, Philip K.	Resigned	6
Collins, Michael	Retired	3
Conrad, Charles, Jr.	Retired	2
Cooper, L. Gordon	Retired	1
Crippen, Robert L.	Flight	7
Cunningham, Walter	Retired	3
Duke, Charles M., Jr.	Retired	5
Eisele, Donn F.	Retired	3
England, Anthony W.	Resigned	6
Engle, Joe H.	Flight	5
Evans, Ronald E.	Retired	5
Freeman, Theodore C.	Deceased	3
Fullerton, Charles G.	Flight	7
Garriott, Owen K.	Flight	4
Gibson, Edward G.	Flight	4
Givens, Edward G.	Deceased	5
Glenn, John H.	Retired	1
Gordon, Richard F., Jr.	Retired	3
Graveline, Duane E.	Resigned	4
Grissom, Virgil I.	Deceased	1
Haise, Fred W., Jr.	Flight	5
Hartsfield, Henry W.	Flight	7
Henize, Karl G.	Flight	6
Holmquest, Donald L.	Resigned	6
Irwin, James B.	Retired	5

<u>NAME</u>	<u>ASTRONAUT STATUS</u>	<u>GROUP NUMBER</u>
Kerwin, Joseph P.	Flight	4
Lenoir, William B.	Flight	6
Lind, Don L.	Flight	5
Llewellyn, John A.	Resigned	6
Lousma, Jack R.	Flight	5
Lovell, James A., Jr.	Retired	2
Mattingly, Thomas K. II	Flight	5
McCandless, Bruce II	Flight	5
McDivitt, James A.	Retired	2
Michel, F. Curtis	Resigned	4
Mitchell, Edgar D.	Retired	5
Musgrave, F. Story	Flight	6
O'Leary, Brian T.	Resigned	6
Overmyer, Robert F.	Flight	7
Parker, Robert A.	Flight	6
Peterson, Donald H.	Flight	7
Pogue, William R.	Leave of Absence	5
Roosa, Stuart A.	Retired	5
Schirra, Walter M., Jr.	Retired	1
Schmitt, Harrison H.	Resigned	4
Schweickart, Russell L.	Resigned	3
Scott, David R.	Retired	3
See, Elliott J.	Deceased	2
Shepard, Alan B., Jr.	Retired	1
Slayton, Donald K.	Flight	1
Stafford, Thomas P.	Retired	2
Swigert, John L., Jr.	Resigned	5
Thornton, William E.	Flight	6
Truly, Richard H.	Flight	7
Weitz, Paul J.	Flight	5
White, Edward H. II	Deceased	2
Williams, Clifton C.	Deceased	3
Worden, Alfred M.	Retired	5
Young, John W.	Flight	2

Group 1, Project Mercury Astronauts Selected April 1959

Flight Status

Donald K. Slayton, Civilian, Manager for Approach and Landing Test, Space Shuttle Program Office, JSC.

No Longer on Flight Status

M. Scott Carpenter, Commander, USN (Ret.), joined U.S. Navy Sealab program 1967. Retired from Navy July 1969 and in private business, Los Angeles, Calif.

L. Gordon Cooper, Colonel, USAF (Ret.), retired July 1970; is Vice President for Research and Development, WED Enterprises, Glendale, Calif.

John H. Glenn, Jr., Colonel, USMC (Ret.), resigned in 1964. Elected U.S. Senator (D-Ohio), November 1974.

Walter M. Schirra, Jr., Captain, USN (Ret.), retired in July 1969. He is Director of Technology Purchase, Johns-Manville Corp., Denver, Colo.

Alan B. Shepard, Jr., Rear Admiral, USN (Ret.), retired from the U.S. Navy and NASA Aug. 1, 1974. He is President of Windward Co., Deer Park, Tex.

Deceased

Virgil I. (Gus) Grissom, Lieutenant Colonel, USAF, died in Apollo spacecraft fire at Kennedy Space Center, Jan. 27, 1967.

Group 2, Test Pilot Astronauts Selected September 1962

Flight Status

John W. Young, Captain, USN (Ret.), Chief, Astronaut Office, Johnson Space Center.

Group 2 (cont'd.)

No Longer on Flight Status

Neil A. Armstrong, Professor of Engineering, University of Cincinnati, effective October 1971. Previously was Deputy Associate Administrator, Aeronautics, NASA Headquarters Office of Advanced Research and Technology, 1970.

Frank Borman, Colonel, USAF (Ret.), President and Chief Operations Officer, Eastern Airlines, Miami, Fla. Retired from NASA and Air Force in July 1970.

Charles Conrad, Jr., Captain, USN (Ret.), retired Feb. 1, 1974. He is Vice President, Marketing, McDonnell Douglas Corp., with offices in Denver, Colo.

James A. McDivitt, Brig. General, USAF (Ret.), President, Pullman Standard Co., Chicago, Ill. He was manager, Apollo Spacecraft Program, NASA Lyndon B. Johnson Space Center, September 1969-1972. He retired from NASA and Air Force Sept. 1, 1972.

James A. Lovell, Jr., Captain, USN (Ret.), is President of Fisk Telephone Systems, Inc., Houston. He served as Deputy Director of Science and Applications, JSC, May 1971-March 1973 when he retired from NASA and the Navy.

Thomas P. Stafford, Major General, USAF. Returned to active Air Force status as Commander, Air Force Flight Test Center, Edwards Air Force Base, Calif., effective Nov. 1, 1975.

Deceased

Elliot M. See, Jr., died in a T-38 jet crash Feb. 28, 1966, Lambert Municipal Airport, St. Louis.

Edward H. White, II, Lieutenant Colonel, USAF, died in Apollo spacecraft fire at Kennedy Space Center Jan. 27, 1967.

Group 3, Pilot Astronauts Selected October 1963

Flight Status

Alan L. Bean, Captain, USN (Ret.).

No Longer on Flight Status

William A. Anders, Formerly U.S. Ambassador to Norway. Formerly Chairman, Nuclear Regulatory Commission. Was Commissioner of the Atomic Energy Commission, August 1973. He served as Executive Secretary, National Aeronautics and Space Council, September 1969-1973. General Manager, Nuclear Energy Products Division with General Electric Co., San Jose, Calif.

Edwin E. Aldrin, Jr., Colonel, USAF (Ret.). He resigned from NASA July 1971 and served as Commander of the Air Force Aerospace Research Pilots School, Edwards, Calif., until he retired from active duty about March 1, 1972. President of Research and Engineering Consultants, Inc., Los Angeles, Calif.

Eugene A. Cernan, Captain, USN (Ret.), retired from the Navy and NASA July 1, 1976. He is Executive Vice President, International, Coral Petroleum Co., Houston.

Michael Collins, became Assistant Secretary of State for Public Affairs in January 1970. Since February 1971 is Director, National Air and Space Museum, Smithsonian Institution, Washington, D.C.

Walter Cunningham, resigned Aug. 1, 1971. He is now Senior Vice President 3D/International, Houston.

Donn F. Eisele, Colonel, USAF (Ret.). Resigned from NASA and retired from the Air Force, July 1972 and joined the Peace Corps. Served as technical assistant for Manned Space Flight, NASA Langley Research Center, Hampton, Va., 1970-1972. Eastern Manager, Marion Power Shovel Co., Williamsburg, Va.

Group 3 (cont'd.)

Richard F. Gordon, Jr., Captain, USN (Ret.), retired from the Navy and NASA Jan. 1, 1972; John W. Mecom Co., Houston.

Russell L. Schweickart, transferred to NASA Headquarters, Washington, D.C., May 1, 1974. Now Assistant for Payload Operations, Office of Planning and Program Integration. Detailed to Governor Brown of California.

David R. Scott, Colonel, USAF (Ret.), appointed Director, NASA Hugh L. Dryden Flight Research Center, Edwards, Calif., April 1975, after serving as the Center Deputy Director since August 1973. He was a special assistant for mission operations, Apollo Spacecraft Program Office, JSC from July 1972 until August 1973. Resigned from NASA Oct. 30, 1977, to enter private business in Los Angeles.

Deceased

Charles A. Bassett II, Major, USAF, died in T-38 jet crash with Elliot See, Feb. 28, 1966, at St. Louis.

Roger B. Chaffee, Lieutenant Commander, USN, died in Apollo spacecraft fire, Kennedy Space Center, Jan. 27, 1967.

Theodore C. Freeman, Captain, USAF, died in T-38 crash Ellington AFB, Houston, Oct. 31, 1964.

Clifton C. Williams, Jr., Major, USMC, died in T-38 crash near Tallahassee, Fla., Oct. 5, 1967.

Group 4, Scientist Astronauts Selected June 1965

Flight Status

Owen K. Garriott, Ph.D. (Electrical Engineering), Assistant Director for Space Sciences, Space and Life Sciences Directorate, Johnson Space Center.

Edward G. Gibson, Ph.D. (Engineering and Physics).

Joseph P. Kerwin, Captain, USN, M.D. (Medicine).

Group 4 (cont'd.)

No Longer on Flight Status

Duane E. Graveline, M.D. (Medicine), resigned for personal reasons in August 1965.

Frank Curtis Michel, Ph.D. (Physics), resigned August 1969 to return to scientific research at Rice University, Houston.

Harrison H. Schmitt, Ph.D. (Geology), resigned from NASA August 1975. Assigned as Special Assistant to NASA Administrator for Energy Research and Development, February 1974; appointed NASA Assistant Administrator for Energy Programs, NASA Headquarters, Washington, D.C., May 1974. Elected U.S. Senator (R-New Mexico), November 1976.

Group 5, Pilot Astronauts Selected April 1966

Flight Status

Vance D. Brand, Civilian.

Joe H. Engle, Colonel, USAF.

Fred W. Haise, Jr., Civilian.

Don L. Lind, Civilian, Ph.D. (Physics).

Jack R. Lousma, Lieutenant Colonel, USMC.

Thomas K. Mattingly, II, Commander, USN.

Bruce McCandless, II, Commander, USN.

Paul J. Weitz, Captain, USN.

No Longer on Flight Status

John S. Bull, Lieutenant Commander, USN (Ret.), withdrew because of pulmonary disease July 1968. Employed in Guidance and Navigation Branch, NASA Ames Research Center, Moffett Field, Calif.

Gerald P. Carr, Colonel, USMC (Ret.), resigned effective June 25, 1977, to join the Houston consulting engineering firm of Bovay Engineers, Inc., as corporate manager for business development.

Group 5 (cont'd.)

Charles M. Duke, Jr., resigned as Colonel, USAF, effective Jan. 1, 1976, to establish Orbit Corp., a business in San Antonio, Tex.

Ronald E. Evans, Captain, USN (Ret.), resigned effective March 15, 1977, to become executive vice president of Western American Energy Corp. and director of WES-PAC Energy, the coal producing concern of WAEC, in Scottsdale, Ariz.

James B. Irwin, Colonel, USAF (Ret.), retired from USAF and NASA Aug. 1, 1972; is Chairman of the Board of Christian evangelical organization, High Flight Foundation, Colorado Springs, Colo.

Edgar D. Mitchell, Captain, USN (Ret.), retired from Navy and NASA Oct. 1, 1972. He is President, Edgar D. Mitchell and Associates, Inc., Palm Beach, Fla.

William R. Pogue, Colonel, USAF (Ret.). On leave of absence from NASA.

Stuart A. Roosa, Colonel, USAF (Ret.), retired from Air Force and NASA Feb. 1, 1976. He is Vice President, International Affairs, U.S. Industries, Inc., and resides in Athens, Greece.

John L. Swigert, Jr., appointed Staff Executive Director, Committee on Science and Astronautics, House of Representatives in April 1973. Resigned from NASA and has announced candidacy for U.S. Senate from Colorado.

Alfred M. Worden, Colonel, USAF (Ret.), assigned to NASA Ames Research Center, Mountain View, Calif., September 1972 as Chief, Systems Studies Division. He has been a vice president of High Flight Foundation, Colorado Springs, Colo., since Sept. 5, 1975. Resides in Palm Beach, Fla.

Deceased

Edward G. Givens, Jr., Major, USAF, died in an automobile accident near Houston, June 6, 1967.

Group 6, Scientist Astronauts Selected August 1967

(All Civilian)

Flight Status

Joseph P. Allen, Ph.D. (Physics), appointed NASA Assistant Administrator for Legislative Affairs August 1975. Available for Space Shuttle flight.

Karl G. Henize, Ph.D. (Astronomy)

William B. Lenoir, Ph.D. (Electrical Engineering)

Story Musgrave, M.D., Ph.D. (Medicine and Physiology)

Robert A. Parker, Ph.D. (Astronomy)

William E. Thornton, M.D. (Medicine)

No Longer on Flight Status

Philip K. Chapman, Sc.D. (Aeronautics and Astronautics), resigned in July 1972. Was Principal Research Scientist with AVCO Everett Research Laboratories, Everett, Mass., and served as a senior research associate at the MIT Measurement Systems Laboratory, Cambridge, Mass. Now with Arthur D. Little Co. in Cambridge, Mass.

Anthony W. England, Ph.D. (Geology and Physics), resigned in August 1972 to accept position with U.S. Geological Survey.

John A. Llewellyn, Ph.D. (Chemistry), resigned for personal reasons, August 1968.

Brian T. O'Leary, Ph.D. (Astronomy), resigned for personal reasons, April 1968.

Donald L. Holmquest, M.D. and Ph.D. (Medicine and Physiology), took leave of absence May 1971 to hold position of assistant professor of Radiology and Physiology, Baylor College of Medicine, Houston. Later resigned from NASA to become Associate Dean of Medicine, Texas A&M University, College Station, Tex. He is now at the Navasota Medical Center, Navasota, Tex.

Group 7, Pilot Astronauts (Former Air Force Manned
Orbiting Laboratory Pilots who entered NASA program
in August 1969)

Flight Status

Karol J. Bobko, Colonel, USAF

Robert L. Crippen, Commander, USN

Charles G. Fullerton, Lieutenant Colonel, USAF

Henry W. Hartsfield, Jr., Colonel, USAF

Robert F. Overmyer, Lieutenant Colonel, USMC

Donald H. Peterson, Colonel, USAF

Richard H. Truly, Commander, USN

MERCURY FLIGHT CREWS

(See pp. 24-26 for dates and significant facts on missions)

Mercury Redstone 3

Flight Pilot:

Alan B. Shepard, Jr.

Backup Pilot:

John H. Glenn

Mercury Redstone 4

Flight Pilot:

Virgil I. Grissom

Backup Pilot:

John H. Glenn

Mercury Atlas 6

Flight Pilot:

John H. Glenn

Backup Pilot:

M. Scott Carpenter

Mercury Atlas 7

Flight Pilot:

M. Scott Carpenter

Backup Pilot:

Walter M. Schirra, Jr.

Mercury Atlas 8

Flight Pilot:

Walter M. Schirra, Jr.

Backup Pilot:

L. Gordon Cooper

Mercury Atlas 9

Flight Pilot:

L. Gordon Cooper

Backup Pilot:

Alan B. Shepard, Jr.

GEMINI FLIGHT CREWS

Gemini 3

Flight Crew:

Commander, Virgil I. Grissom
Pilot, John W. Young

Backup Crew:

Commander, Walter M. Schirra, Jr.
Pilot, Thomas P. Stafford

Gemini 4

Flight Crew:

Commander, James A. McDivitt
Pilot, Edward H. White, II

Backup Crew:

Commander, Frank Borman
Pilot, James A. Lovell, Jr.

Gemini 5

Flight Crew:

Commander, L. Gordon Cooper
Pilot, Charles Conrad, Jr.

Backup Crew:

Commander, Neil A. Armstrong
Pilot, Elliott J. See

Gemini 6

Flight Crew:

Commander, Walter M. Schirra, Jr.
Pilot, Thomas P. Stafford

Backup Crew:

Commander, Virgil I. Grissom
Pilot, John W. Young

Gemini 7

Flight Crew:

Commander, Frank Borman
Pilot, James A. Lovell, Jr.

Backup Crew:

Commander, Edward H. White, II
Pilot, Michael Collins

Gemini 8

Flight Crew:

Commander, Neil A. Armstrong
Pilot, David R. Scott

Backup Crew:

Commander, Charles Conrad, Jr.
Pilot, Richard F. Gordon, Jr.

Gemini 9

Flight Crew:

Commander, Thomas P. Stafford
Pilot, Eugene A. Cernan

Backup Crew:

Commander, James A. Lovell, Jr.
Pilot, Edwin E. Aldrin, Jr.

Gemini 10

Flight Crew:

Commander, John W. Young
Pilot, Michael Collins

Backup Crew:

Commander, Alan L. Bean
Pilot, Clifton C. Williams

Gemini 11

Flight Crew:

Commander, Charles Conrad, Jr.
Pilot, Richard F. Gordon, Jr.

Backup Crew:

Commander, Neil A. Armstrong
Pilot, William A. Anders

Gemini 12

Flight Crew:

Commander, James A. Lovell, Jr.
Pilot, Edwin E. Aldrin, Jr.

Backup Crew:

Commander, L. Gordon Cooper
Pilot, Eugene A. Cernan

APOLLO FLIGHT CREWS

Apollo-Saturn 204

Prime Crew: (Died in spacecraft fire Jan. 27, 1967,
approximately 1 month before mission
was scheduled)

Commander, Virgil I. Grissom
Command Module Pilot, Edward H. White, II
Lunar Module Pilot, Roger B. Chaffee

Backup Crew:

Commander, Walter M. Schirra, Jr.
Command Module Pilot, Donn F. Eisele
Lunar Module Pilot, Walter Cunningham

Apollo 7

Flight Crew:

Commander, Walter M. Schirra, Jr.
CM Pilot, Donn F. Eisele
LM Pilot, Walter Cunningham

Backup Crew:

Commander, Thomas P. Stafford
CM Pilot, John W. Young
LM Pilot, Eugene A. Cernan

Apollo 8

Flight Crew:

Commander, Frank Borman
CM Pilot, James A. Lovell, Jr.
LM Pilot, William A. Anders

Backup Crew:

Commander, Neil A. Armstrong
CM Pilot, Edwin E. Aldrin, Jr.
LM Pilot, Fred W. Haise, Jr.

Apollo 9

Flight Crew:

Commander, James A. McDivitt
CM Pilot, David R. Scott
LM Pilot, Russell L. Schweickart

Backup Crew:

Commander, Charles Conrad, Jr.
CM Pilot, Richard F. Gordon, Jr.
LM Pilot, Alan L. Bean

Apollo 10

Flight Crew:

Commander, Thomas P. Stafford
CM Pilot, John W. Young
LM Pilot, Eugene A. Cernan

Backup Crew:

Commander, L. Gordon Cooper
CM Pilot, Donn F. Eisele
LM Pilot, Edgar D. Mitchell

Apollo 11

Flight Crew:

Commander, Neil A. Armstrong
CM Pilot, Michael Collins
LM Pilot, Edwin E. Aldrin, Jr.

Backup Crew:

Commander, James A. Lovell, Jr.
CM Pilot, William A. Anders
LM Pilot, Fred W. Haise, Jr.

Apollo 12

Flight Crew:

Commander, Charles Conrad, Jr.
CM Pilot, Richard F. Gordon, Jr.
LM Pilot, Alan L. Bean

Backup Crew:

Commander, David R. Scott
CM Pilot, Alfred M. Worden
LM Pilot, James B. Irwin

Apollo 13

Flight Crew:

Commander, James A. Lovell, Jr.
CM Pilot, John L. Swigert, Jr.*
LM Pilot, Fred W. Haise, Jr.

Backup Crew:

Commander, John W. Young
CM Pilot, John L. Swigert, Jr.
LM Pilot, Charles M. Duke, Jr.

Apollo 14

Flight Crew:

Commander, Alan B. Shepard, Jr.
CM Pilot, Stuart A. Roosa
LM Pilot, Edgar D. Mitchell

Backup Crew:

Commander, Eugene A. Cernan
CM Pilot, Ronald E. Evans
LM Pilot, Joe H. Engle

*Substituted for Thomas K. Mattingly, II, who had been exposed to, but did not contract, measles.

Apollo 15

Flight Crew:

Commander, David R. Scott
CM Pilot, Alfred M. Worden
LM Pilot, James B. Irwin

Backup Crew:

Commander, Richard F. Gordon, Jr.
CM Pilot, Vance D. Brand
LM Pilot, Harrison H. Schmitt

Apollo 16

Flight Crew:

Commander, John W. Young
CM Pilot, Thomas K. Mattingly, II
LM Pilot, Charles M. Duke, Jr.

Backup Crew:

Commander, Fred W. Haise, Jr.
CM Pilot, Stuart A. Roosa
LM Pilot, Edgar D. Mitchell

Apollo 17

Flight Crew:

Commander, Eugene A. Cernan
CM Pilot, Ronald E. Evans
LM Pilot, Harrison H. Schmitt

Backup Crew:

Commander, John W. Young
CM Pilot, Stuart A. Roosa
LM Pilot, Charles M. Duke, Jr.

SKYLAB CREWS

First Manned Mission

Flight Crew:

Commander, Charles Conrad, Jr.
Science Pilot, Dr. Joseph P. Kerwin
Pilot, Paul J. Weitz

Backup Crew:

Commander, Russell L. Schweickart
Science Pilot, Dr. Story Musgrave
Pilot, Bruce McCandless, II

Second Manned Mission

Flight Crew:

Commander, Alan L. Bean
Science Pilot, Dr. Owen K. Garriott
Pilot, Jack R. Lousma

Backup Crew:

Commander, Vance D. Brand
Science Pilot, Dr. Don L. Lind
Pilot, Dr. William E. Lenoir

Third Manned Mission

Flight Crew:

Commander, Gerald P. Carr
Science Pilot, Dr. Edward G. Gibson
Pilot, William R. Pogue

Backup Crew:

(Same backup crew as second manned mission)

APOLLO SOYUZ TEST PROJECT CREW

Prime Crew:

Commander, Thomas P. Stafford
Command Module Pilot, Vance D. Brand
Docking Module Pilot, Donald K. Slayton

Backup Crew:

Commander, Alan L. Bean
Command Module Pilot, Ronald E. Evans
Docking Module Pilot, Jack R. Lousma

Support Crew:

Richard H. Truly
Robert F. Overmyer
Robert L. Crippen
Karol J. Bobko

SHUTTLE ORBITER APPROACH AND LANDING TEST FLIGHTS

Crews:

Commander Fred W. Haise, Jr.
Pilot Charles G. Fullerton

(Haise and Fullerton were the crew for Captive Flights 1 and 3, and Free Flights 1, 3 and 5.)

Commander Joe H. Engle
Pilot Richard H. Truly

(Engle and Truly were the crew for Captive Flight 2, and Free Flights 2 and 4.)

ASTRONAUTS WHO HAVE FLOWN IN SPACE (43)

One Flight (26)

William A. Anders	Apollo 8
Vance D. Brand	Apollo Soyuz
M. Scott Carpenter	Mercury 7
Gerald P. Carr	Skylab 4
Walter Cunningham	Apollo 7
Charles M. Duke, Jr.	Apollo 16
Donn F. Eisele	Apollo 7
Ronald Evans	Apollo 17
Owen K. Garriott	Skylab 3
Edward G. Gibson	Skylab 4
John H. Glenn	Mercury 6
Fred W. Haise, Jr.	Apollo 13
James B. Irwin	Apollo 15
Joseph P. Kerwin	Skylab 2
Jack R. Lousma	Skylab 3
Thomas K. Mattingly, II	Apollo 16
Edgar D. Mitchell	Apollo 14
William R. Pogue	Skylab 4
Stuart A. Roosa	Apollo 14
Harrison H. Schmitt	Apollo 17
Russell L. Schweickart	Apollo 9
Donald K. Slayton	Apollo Soyuz
John L. Swigert, Jr.	Apollo 13
Paul J. Weitz	Skylab 2
Edward H. White, II	Gemini 4
Alfred M. Worden	Apollo 15

Two Flights (10)

Edwin E. Aldrin, Jr.	Gemini 12, Apollo 11
Neil A. Armstrong	Gemini 8, Apollo 11
Alan L. Bean	Apollo 12, Skylab 3
Frank Borman	Gemini 7, Apollo 8
Michael Collins	Gemini 10, Apollo 11
L. Gordon Cooper	Mercury 9, Gemini 5
Richard F. Gordon, Jr.	Gemini 11, Apollo 12
Virgil I. Grissom	Mercury 4, Gemini 3
James A. McDivitt	Gemini 4, Apollo 9
Alan B. Shepard, Jr.	Mercury 3, Apollo 14

Three Flights (3)

Eugene A. Cernan	Gemini 9, Apollo 10, Apollo 17
Walter M. Schirra	Mercury 8, Gemini 6, Apollo 7
David R. Scott	Gemini 8, Apollo 9, Apollo 15

Four Flights (4)

Charles Conrad, Jr.	Gemini 5, Gemini 11, Apollo 12, Skylab 2
James A. Lovell, Jr.	Gemini 7, Gemini 12, Apollo 8, Apollo 13
John W. Young	Gemini 3, Gemini 10, Apollo 10, Apollo 16
Thomas P. Stafford	Gemini 6, Gemini 9, Apollo 10, Apollo Soyuz

Mission	Crew	Date	Duration hr min sec	Remarks
Mercury Redstone 3	Shepard	May 5, 1961	00 15 22	Suborbital flight - first American in space USS Champlain, Atlantic recovery (A) Spacecraft call sign Freedom 7
Mercury Redstone 4	Grissom	July 21, 1961	00 15 37	Also suborbital, successful flight but spacecraft sank, astronaut rescued USS Randolph (A) Liberty Bell 7
Mercury-Atlas 6	Glenn	Feb 20, 1962	04 55 23	Three-orbit flight, first American in orbit, retro-pack retained when erroneous signal indicated heat shield possibly loose, capsule landed 40 miles uprange USS Noa, (A), Friendship 7
Mercury Atlas 7	Carpenter	May 24, 1962	04 56 05	Also three-orbit mission, yaw error at manual retrofire caused 250-mile landing overshoot USS Pierce (A) Aurora 7
Mercury-Atlas 8	Schirra	Oct 3, 1962	09 13 11	Six-orbit flight, capsule landed 4-1/2 miles from recovery ship USS Kearsarge, Pacific (P) Sigma 7
Mercury Atlas 9	Cooper	May 15 and 16 1963	34 19 49	Twenty-two orbits to evaluate effects on man of 1 day in space, landed 4-1/2 miles from USS Kearsarge (P) Faith 7
Gemini Titan III	Grissom, Young	March 23, 1965	04 53 00	Three-orbit demonstration of the spacecraft, maneuver over Texas on first pass changed orbital path of a manned spacecraft for first time, landed about 50 miles uprange USS Intrepid (A) Molly Brown (only Gemini named).
Gemini-Titan IV	McDivitt, White	June 3 to 7, 1965	97 56 11	Four-day flight with White first American to walk in space in 20-minute extravehicular activity (hatch open 36 minutes), after 62 revolutions of Earth, landed 50 miles uprange from USS Wasp (A).
Gemini-Titan V	Cooper, Conrad	Aug 21 to 29, 1965	190 55 14	First use of fuel cells for electric power, evaluated guidance and navigation system for future rendezvous missions, incorrect navigation coordinates from ground control resulted in landing 90 miles short, 120 revolutions USS Lake Champlain (A)
Gemini-Titan VII	Borman, Lovell	Dec 4 to 18, 1965	330 35 31	Longest-duration Gemini flight provided rendezvous target for Gemini VI-A, crew flew portions of mission in shirtsleeves for first time, 206 revolutions, landed 6 4 miles from target USS Wasp (A)
Gemini-Titan VI-A	Schirra, Stafford	Dec 15 and 16, 1965	25 51 24	Rescheduled to rendezvous with Gemini VII after original target Agena failed to orbit, VI-A launch postponed 3 days when launch vehicle engines automatically shut down 1 2 seconds after ignition, completed first space rendezvous, after 16 revolutions, landed within 7 miles of target to initiate series of pinpoint landings by Gemini spacecraft USS Wasp (A)
Gemini-Titan VIII	Armstrong, Scott	March 16, 1966	10 41 26	First docking of one space vehicle with another, about 27 minutes after docking, Gemini-Agena combination began to yaw and roll at increasing rates, emergency procedures included undocking, deactivation of malfunctioning spacecraft control system, activation of reentry control system, mission was terminated and, midway through 7th revolution, spacecraft landed 1 1 miles from planned landing point in secondary recovery area in western Pacific destroyer USS Mason picked up crew 3 hours later
Gemini-Titan IX-A	Stafford, Cernan	June 3 to 6, 1966	72 21 00	Rescheduled to rendezvous and dock with augmented target docking adapter after original target Agena failed to orbit, ATDA shroud did not completely separate, making docking impossible, three different types of rendezvous were completed, Cernan carried out 2 hours 7 minutes of EVA, 44 revolutions, 0 38 miles from target USS Wasp (A)

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Gemini-Titan X	Young, Collins	July 18 to 21, 1966	70 46 39	First use of Agena target vehicle's propulsion systems, spacecraft also rendezvoused with Gemini VIII target vehicle Collins had 49 minutes of EVA standing in hatch, 39-minute EVA to retrieve experiment from Agena VIII 43 revs 3 4 miles, USS Guadacanal (A)
Gemini Titan XI	Conrad Gordon	Sept 12 to 15, 1966	71 17 08	Gemini record altitude (739 2 miles) reached using Agena propulsion after first revolution rendezvous and docking Gordon fastened Agena-anchored tether to Gemini docking bar, and spacecraft later made two revolutions of Earth in tethered configuration, Gordon 33-minute EVA and 2-hour 5-minute standup EVA, 44 revs, 1 5 miles, USS Guam (A)
Gemini-Titan XII	Lovell, Aldrin	Nov 11 to 15, 1966	94 34 31	Final Gemini flight Aldrin logged 2-hour 29 minute standup EVA, 55 minute standup EVA, and 2-hour 6-minute EVA for Gemini record total of 5 hours 30 minutes of extravehicular activity, 59 revs, 2 6 miles, USS Wasp (A)
Apollo-Saturn 7	Schirra, Eisele, Cunningham	Oct 11 to 22, 1968	260 09 03	First manned flight of Apollo spacecraft command-service module only, 163 revolutions USS Essex (A) - all Apollo spacecraft splashed down within 10 miles of predicted landing point
Apollo-Saturn 8	Borman, Lovell, Anders	Dec 21 to 27, 1968	147 00 42	First flight to the Moon (command-service module only), views of lunar surface televised to Earth, 10 revolutions of the Moon, USS Yorktown (P)
Apollo-Saturn 9	McDivitt, Scott, Schweickart	March 3 to 13, 1969	241 00 54	First manned flight of lunar module, spacecraft call signs for communications identification when undocked CSM "Gumdrop" and LM "Spider", Schweikart 37 minute EVA from LM, 151 revs, USS Guadacanal (A)
Apollo-Saturn 10	Stafford, Young, Cernan	May 18 to 26, 1969	192 03 23	First lunar module orbit of Moon, call signs Charlie Brown and Snoopy, 31 revs of Moon (4 revs by undocked LM) USS Princeton (P)
Apollo-Saturn 11	Armstrong, Collins Aldrin	July 16 to 24, 1969	195 18 35	First lunar landing, call signs Columbia and Eagle, lunar stay time 21 hours 36 minutes 21 seconds, Armstrong and Aldrin EVA (hatch open to hatch close) 2 hours 31 minutes 40 seconds, lunar surface samples 48 5 pounds, 30 revs, USS Hornet (P)
Apollo-Saturn 12	Conrad Gordon, Bean	Nov 14 to 24, 1969	244 36 25	Yankee Clipper and Intrepid, stay time 31 hours 31 minutes, Conrad and Bean EVAs 3 hours 56 minutes and 3 hours 49 minutes, lunar samples 74 7 pounds plus parts from Surveyor 3 unmanned spacecraft 45 revs USS Hornet (P)
Apollo Saturn 13	Lovell Swigert, Haise	Apr 11 to 17, 1970	142 54 41	Odyssey and Aquarius, mission aborted after service module oxygen tank ruptured, using lunar module oxygen and power until just before reentry, crew returned safely to Earth, USS Iwo Jima (P)
Apollo-Saturn 14	Shepard Roosa Mitchell	Jan 31 to Feb 9, 1971	216 01 57	Kitty Hawk and Antares, stay time 33 31 Shepard and Mitchell EVAs 4 48 and 4 35, samples 96 pounds 34 revs USS New Orleans (P)
Apollo Saturn 15	Scott Worden Irwin	July 26 to Aug 7 1971	295 11 53	Endeavour and Falcon, first use of lunar roving vehicle, stay time 66 55, Scott standup EVA 33 minutes, Scott and Irwin EVAs 6 33, 7 12 and 4 50, Worden trans-Earth EVA 38 minutes, samples 170 pounds, 74 revs, USS Okinawa (P)
Apollo-Saturn 16	Young Mattingly Duke	April 16 to April 27 1972	265 51 05	Casper and Orion stay time 71 02, Young and Duke EVAs 7 11, 7 23 and 5 40, Mattingly trans-Earth EVA 1 24, samples 213 pounds, 64 revs, USS Ticonderoga (P)
Apollo Saturn 17	Cernan, Evans, Schmitt	Dec 7 to Dec 19, 1972	301 51 59	America and Challenger, stay time 75 00, Cernan and Schmitt EVAs 7 12, 7 37 and 7 15, Evans trans-Earth EVA 1 06, samples 243 pounds, 75 revs, USS Ticonderoga (P) First night launch, Dec. 6, in Central, Mountain and Pacific time zones.

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MISSION	CREW	DATE	DURATION	DESCRIPTION
Skylab 2 (first manned mission)	Conrad Kerwin Weitz	May 25 to June 22, 1973	672:49:49 (28 days)	First U. S. manned orbiting space station mission; crew deployed solar shield; released stuck solar panel. These repair activities permitted manned operations of the Orbital Workshop after meteoroid shield was damaged and torn off during boost. Data obtained on 46 of 55 experiments. Crew performed 3 space walks totaling 5 hours, 41 minutes; USS Ticonderoga.
Skylab 3	Bean Garriott Lousma	July 28 to Sept. 25, 1973	1427:09:04 (59 days)	Crew performed systems and operational tests, deployed new solar shield, replaced rate gyros. Crew substantially exceeded pre-mission plans for scientific activities. Performed three space walks totaling 13 hours, 44 minutes; USS New Orleans.
Skylab 4	Carr Gibson Pogue	Nov. 16, 1973 to Feb. 8, 1974	2017:15:32 (84 days)	Final Skylab manned visit; longest flight of men in space. Crew replenished coolant supplies, repaired antenna, made observations of Comet Kohoutek. Crew performed four space walks totaling 22 hours, 21 minutes. Set record for space walk duration -- 7 hours, 1 minute; USS New Orleans.
Apollo Soyuz Test Project	Stafford Brand Slayton	July 15-24, 1975	217:28:24 (9 days)	First U.S.-U.S.S.R. joint manned mission; accomplished spacecraft rendezvous and docking; crew transfer; docking and undocking; interaction of control centers and interaction of spacecraft crews; USS New Orleans.

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ASTRONAUTS COMPARATIVE FLIGHT TIME

<u>ASTRONAUT</u>	<u>FLIGHTS</u>	<u>HRS., MINS.</u>
Carr	1	2017:15
Gibson	1	2017:15
Pogue	1	2017:15
*Bean (4th)	2	1671:45
Garrriott	1	1427:09
Lousma	1	1427:09
*Conrad (3rd)	4	1179:38
Lovell	4	715:05
Kerwin	1	672:49
Weitz	1	672:49
*Cernan (11th)	3	566:15
*Scott (7th)	3	546:54
*Young (9th)	4	533:33
Stafford	4	507:43
Borman	2	477:36
McDivitt	2	338:57
Gordon	2	315:53
Evans	1	301:51
*Schmitt (12th)	1	301:51
Schirra	3	295:13
*Irwin (8th)	1	295:11
Worden	1	295:11
*Aldrin (2nd)	2	289:53
Collins	2	266:05
Mattingly	1	265:51
*Duke (10th)	1	265:51
Eisele	1	260:09
Cunningham	1	260:09
Schweickart	1	241:01
Cooper	2	225:15
Brand	1	217:28
Slayton	1	217:28
*Shepard (5th)	2	216:17
*Mitchell (6th)	1	216:01
Roosa	1	216:01
*Armstrong (1st)	2	206:00
Anders	1	147:00
Haise	1	142:54
Swigert	1	142:54
White	1	97:56
Grissom	2	5:08
Carpenter	1	4:56
Glenn	1	4:55

*Walked on the lunar surface (in order of walk)

EXTRAVEHICULAR ACTIVITY (EVA) RECORD

Mission	Launch Date	In-Flight		Lunar Exploration		Lunar-Stay Time	
		Astronaut	Hrs/Min	Astronaut	Hrs/Min	Hrs/Min	Site
Gemini 4	6/3/65	White	00:23				
Gemini 9	6/3/66	Cernan	2:10				
Gemini 10	7/18/66	Collins	1:27				
Gemini 11	9/12/66	Gordon	2:44				
Gemini 12	11/11/66	Aldrin	5:30				
Apollo 9	3/3/69	Schweickart	00:46				
Apollo 11	7/16/69			Armstrong Aldrin	2:40 2:15	21:36	Sea of Tranquility
Apollo 12	11/14/69			Conrad Bean	7:45	31:31	Ocean of Storms
Apollo 14	1/31/71			Shepard Mitchell	9:17	33:30	Fra Mauro
Apollo 15	7/26/71	Worden	00:38	Scott Irwin	18:35	66:54	Hadley Apennine
Apollo 16	4/16/72	Mattingly	1:13	Young Duke	20:15	71:14	Descartes
Apollo 17	12/7/72	Evans	1:06	Cernan Schmitt	22:04	74:59	Taurus- Littrow
Skylab SL 1&2 1st Manned Visit	5/25/73	Conrad Kerwin Weitz	6:34 3:58 2:11				
Skylab SL 3 2nd Manned Visit	7/28/73	Bean Garriott Lousma	2:41 13:42 11:01				
Skylab SL 4 3rd Manned Visit	11/16/73	Carr Gibson Pogue	15:48 15:17 13:31				

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